

CLAIMS

What is claimed is:

1. A vehicle driveline comprising:

at least one of a clutch and transmission;

a sensor for determining an undesired condition at said at least one of said clutch and said transmission, said sensor communicating with a control, said control communicating with a primary warning device to provide a warning to an operator of the vehicle of said undesired condition; and

said control being operable to monitor the operation of said primary warning device and actuate a secondary warning device should an indication be received that said primary warning device has failed.

2. A system as set forth in Claim 1, wherein said vehicle driveline includes both a clutch and a transmission.

3. A system as set forth in Claim 1, wherein said secondary warning is audio.

4. A system as set forth in Claim 1, wherein said secondary warning is a visual warning.

5. A system as set forth in Claim 1, wherein said secondary warning controls operation of a vehicle driveline component.

6. A system as set forth in Claim 5, wherein said secondary warning includes actuation of one of said engine and a vehicle brake.
7. A system as set forth in Claim 6, wherein the operation of said engine is controlled to provide said secondary warning.
8. A system as set forth in Claim 6, wherein a vehicle brake system is actuated to provide said secondary warning.
9. A system as set forth in Claim 1, wherein said sensor senses clutch slippage, and said primary warning is provided to an operator to provide an indication of said clutch slippage, and if said primary warning device fails, said secondary warning is then actuated.
10. A system as set forth in Claim 9, wherein a pair of sensors sense engine speed and transmission input shaft speed to identify clutch slippage.

11. A vehicle driveline and warning system comprising:
 - a clutch, and a sensor for monitoring clutch slippage;
 - a control for receiving a signal from said sensor indicating a clutch slippage, said control communicating with a warning device to provide a warning to an operator of said clutch slippage; and
 - said control being operable to change said warning should said clutch slippage continue over time.
12. A system as set forth in Claim 11, wherein said control increases the frequency of said warning if said clutch slippage continues to occur.
13. A system as set forth in Claim 11, where said increase in frequency occurs if said clutch slippage continues to occur over time.
14. A system as set forth in Claim 12, wherein said increase in frequency occurs if said clutch has an increasing temperature.

15. A method of providing a warning to the operator of a vehicle comprising the steps of:
 - (1) providing a vehicle driveline including a clutch and a transmission;
 - (2) monitoring operation of at least one of said clutch and said transmission, and detecting an undesired condition;
 - (3) providing an indication to a control of said undesired condition, and said control sending a message to a primary warning device to provide a warning to an operator, said control also monitoring the operability of said primary warning device; and
 - (4) said control actuating a secondary warning device if said control determines that said primary warning device has failed.

16. A method of operating a clutch comprising the steps of:

- (1) monitoring a clutch for slippage, and providing a warning should slippage be detected;
- (2) continuing to monitor said clutch for clutch slippage, and changing the nature of said warning should said clutch slippage continue to occur.

17. A method as set forth in Claim 16, wherein said warning has a frequency that increases if said clutch slippage continues to occur over time.

18. A method as set forth in Claim 16, wherein said change in the nature of said warning is an increase in the frequency of the warning should said clutch have an increasing temperature.